



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/527,917

10/14/2005

Eberhard Rau

3186

8573

7590  
Striker Striker & Stenby  
103 East Neck Road  
Huntington, NY 11743

02/26/2008

EXAMINER

CAZAN, LIVIUS RADU

ART UNIT

PAPER NUMBER

3729

MAIL DATE

DELIVERY MODE

02/26/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/527,917	<b>Applicant(s)</b> RAU ET AL.	
	<b>Examiner</b> LIVIOUS R. CAZAN	<b>Art Unit</b> 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/16/05</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 11-15, 17, and 19-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi (US6317962, corresponding to JP9103052 cited by the Applicant).

Adachi discloses substantially steps a-e of claims 11 and 19. See page 1, Ins. 5-19 of the present specification. See ln. 50 of col. 2 to ln 20 of col. 3 of Adachi. The welding seam is disposed on a radial outside of the yoke at 51b in Fig. 1 of Adachi and also on an axial end of the stator core, to the extent an axis can pass through the end comprising the welding seam. The stator thus formed is for a generator (see col. 1, Ins. 5-10 of Adachi).

Adachi does not disclose the welding seam depth being a function of the yoke height and a tolerance value and being given by the formula claimed in claims 11 and 19, nor the tolerance value being 1 or 0.5 mm as claimed in claims 12, 13, 21 and 22, nor the welding seam depth having a minimum value being given by a formula as claimed in claims 14 and 23.

However, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to optimize the welding seam depth in order to obtain the most

Art Unit: 3729

reliable weld. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In particular, it is readily apparent to one of skill in the art that the weld quality depends directly on the welding seam depth, since if the welding seam is too thin the weld is not reliable, and if it is too thick, excess work is required to obtain the deeper welding seam. Moreover, it is readily apparent that as the height of the stack increases, the mass of the stator increases too, which necessitates a deeper welding seam, in order to ensure the weld holds the laminations together. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to optimize the weld seam depth in order to obtain the best quality weld necessary for a particular stack height. It is deemed that one of ordinary skill in the art, upon performing such an optimization, would obtain a weld seam depth that satisfies the claimed formulas. Moreover, regarding the particular tolerance values, it would have been obvious to one of ordinary skill in the art to choose a tolerance value based on the specific design requirements. For example, stators and rotors of electrical machines require high tolerances because there can be no friction between a stator and a rotor or a mechanical imbalance caused by uneven mass distribution. As such, the tolerance value would be chosen so as to ensure proper functioning of the machine and is a matter of engineering design choice.

3. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi in view of Rich (US4102040).

Adachi discloses substantially the same invention as the Applicant, except for the welding seam being between two tooth halves, as claimed.

Rich teaches placing a welding seam at such a location (see Figs. 6 and 8 for example).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the invention of Adachi in view of the teachings of Rich, by providing a welding seam as claimed since Rich teaches an alternative location for placing the seam, as known in the art.

4. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi in view of Ozawa (JP2001231190).

Adachi discloses substantially the same invention as the Applicant except for utilizing a laser to perform the weld.

Ozawa teaches that it is known to do so (see abstract).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to utilize a laser to weld the stator laminations, since this is an art-recognized method of welding stator cores similar to those of Adachi.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LIVIUS R. CAZAN whose telephone number is (571)272-8032. The examiner can normally be reached on M-T 6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571)272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. Dexter Tugbang/  
Primary Examiner  
Art Unit 3729

/L. R. C./ 2/19/2008  
Examiner, Art Unit 3729